AMENDMENTS TO THE CLAIMS

1.   (Previously Presented) A system for recording and synthesizing position data, comprising:

a reference receiver having a known position, wherein the reference receiver includes reference position data, and further wherein the reference receiver generates an error correction signal;

a mobile receiver that has a variable position, wherein the mobile receiver includes raw position data; and

a processor that generates trajectory path data based on the raw position data and the reference position data, wherein the trajectory path data corresponds to a trajectory path of the mobile receiver, and further wherein the processor polls the reference receiver a plurality of times at a variable execution rate and generates a plurality of error correction signals, the variable execution rate being based at least in part on a desired resolution.

2.   (Previously Presented)   The system of claim 1, wherein the reference receiver receives at least one global positioning system (GPS) signal from at least one GPS satellite, and wherein the reference receiver generates the error correction signal as the reference position data corresponding to the GPS satellite based on the GPS signal.

3-4.   (Cancelled).

5.   (Original)   The system of claim 1, wherein the error correction signal is a difference between an ideal GPS signal travel time and an actual GPS signal travel time, and wherein the processor generates the trajectory data by correcting the raw position data using the error correction signal.

6.   (Original)   The system of claim 1, wherein the reference position data describes the known position of the reference receiver in a global coordinate system, and wherein the raw position data describes relative positions between the reference receiver and the mobile receiver.

7.   (Original)   The system of claim 6, wherein the processor generates the trajectory path data by converting the raw position data from the relative positions between the reference receiver and the mobile receiver into the global coordinate system.

8.   (Original)   The system of claim 1, wherein at least one of the raw position data and the reference position data is a series of at least one of position data and time data.

9.   (Original)   The system of claim 1, further comprising a memory for storing at least one of the reference position data, the raw position data and the trajectory path data.

10.   (Original)   The system of claim 9, further comprising an external device having an interface that couples with the memory for downloading at least one of the reference position data, the raw position data and the trajectory path data to the external device, and
        wherein the external device includes a display for generating a visual display of the trajectory path data.

11.   (Original)   The system of claim 10, wherein the external device includes an external device memory for storing a plurality of discrete trajectory path data corresponding to a plurality of trajectory paths.

12.   (Original)   The system of claim 11, wherein the external device further includes terrain visualization data corresponding to a terrain, and wherein the external device combines the discrete trajectory path data with a terrain dataset generated from the terrain visualization data to form a composite simulation dataset to be displayed on the display.

13.   (Original)   The system of claim 12, wherein the composite simulation dataset can be viewed from more than one viewing perspective.

14.   (Original)   The system of claim 10, wherein the external device further includes terrain visualization data corresponding to a terrain, and wherein the external device combines the trajectory path data with a terrain dataset generated from the terrain visualization data to form a composite simulation dataset to be displayed on the display.

15.   (Original)   The system of claim 14, wherein the composite simulation dataset can be viewed from more than one viewing perspective.

16.   (Original)   The system of claim 14, wherein the external device stores the composite simulation dataset at a storage location accessible via the Internet that allows viewing of the composite simulation dataset from a remote location.

17.   (Original)   The system of claim 14, wherein the external device stores the composite simulation dataset on a recording medium.

18 – 33 (Canceled)

34.   (Previously Presented)   A method for recording and synthesizing position data, comprising the acts of:

generating reference position data corresponding to a known position for a reference receiver by polling the reference receiver a plurality of times at a variable execution rate, the variable execution rate being based at least in part on a desired resolution;

generating raw position data corresponding to a variable position of a mobile receiver; and

generating trajectory path data based on the raw position data and the reference position data, wherein the trajectory path data corresponds to a trajectory path of the mobile receiver.

35.   (Original)   The method of claim 34, wherein the act of generating reference position data includes the act of receiving at least one global positioning system (GPS) signal from at least one GPS satellite and generating an error correction signal as the reference position data corresponding to each GPS satellite based on the GPS signal.

36 – 37.   (Cancelled).

38.   (Original)   The method of claim 34, further comprising the step of combining the trajectory path data with a terrain dataset generated from terrain visualization data to form a composite simulation dataset.

39.   (Original)   The method of claim 38, wherein the terrain visualization data includes environment data corresponding to at least one environmental characteristic, and wherein the method includes the step of selecting at least one environmental characteristic during the combining step.

40.   (Original)   The method of claim 38, further comprising the step of providing more than one viewing perspective for the composite simulation dataset.

41.   (Original)   The method of claim 34, further comprising the step of storing the composite simulation dataset in a storage location.

42.   (Original)   The method of claim 41, wherein the storing step stores the composite simulation dataset in a storage medium.

43.   (Original)   The method of claim 41, wherein the storing step stores the composite simulation dataset in an Internet-accessible storage location.

44 - 48.   (Cancelled)

49.   (Currently Amended)   A system for synthesizing trajectory path data corresponding to a trajectory path and generated from reference position data obtained from a known position and raw position data obtained from a variable position data, the system comprising:
          a data source having terrain visualization data for generating a terrain dataset;
          a processor for combining the trajectory path data with the terrain dataset to form a composite simulation dataset that can be viewed from more than one perspective; and
          a display that displays the composite simulation dataset,

wherein <u>the processor combines trajectory path data corresponding to more than one trajectory path with the terrain dataset.</u> the composite simulation dataset is displayed from the first-person perspective, and wherein the display represents said more than one trajectory path with the terrain dataset by displaying additional participants following said more than one trajectory path.

50 - 53.   (Cancelled)